

REMARKS

I. Formalities

Claims 1-10 remain in the subject patent application. Claims 1, 2, 7, and 10 are amended and claims 11-17 are added herein. Support for the amendments to claim 1 can be found at least in FIGs. 1, 2, and 3. Claim 2 was amended only by removing certain portions of the claim and adding them to claim 1. The removal of the portions of claim 2 does not broaden the scope of amended claim 2. Support for the amendments to claims 7 and 10 can be found at least at page 10, lines 1-8, and in FIGs. 1, 2, and 3. Support for new claim 11 can be found at least at page 10, lines 12-16. Support for new claim 12 can be found at least at page 8, lines 16-17. Support for new claims 13 and 17 can be found at least in FIGs. 1-5. Support for new claims 14 and 15 can be found at least at page 10, lines 1-8, and in FIG. 3. Support for new claim 16 can be found at least in FIGs. 1, 2, 4, and 5. Accordingly, Applicant respectfully submits that no new matter is added herein.

II. Response to the 35 U.S.C. §103 Rejections

Claims 1-5, 7, 9, and 10 were rejected under 35 U.S.C. §103(a) as being allegedly unpatentable over U.S. Patent No. 2,376,676 to Ferguson (hereinafter “Ferguson”) in view of U.S. Patent No. 1,469,911 to Aumiller (hereinafter “Aumiller”). These rejections are respectfully traversed in view of the remarks made below.

A. Remarks Directed to Claim 1

As the pending patent application makes clear, the stake removal tool of the present invention makes use of a mechanical advantage provided by the relatively long length of the tool’s handle compared to the relatively small eccentricity between the gripper and the handle axis. This mechanical advantage amplifies the gripping force applied to the stake. (See page 6, lines 12-14.) The eccentricity referred to is embodied in an offset distance between: (1) a point on the axis of rotation of a handle of the stake removal tool; and (2) an axis of a gripper of the tool, as explained at page 9, line 19, to page 10, line 1. As also explained in the same section of the pending patent application, the eccentricity provided by the offset distance allows the grippers to move on an arc centered on the axis of rotation of the handle. As shown in at least

FIG. 3 of the pending application, (see, e.g., reference numeral 301), the axis of the gripper is offset from the point on the axis of the handle in both the vertical and the horizontal dimensions. This limitation has been added herein to (amended) claim 1.

Ferguson does not teach or suggest the foregoing limitation. Instead, Ferguson shows a gripper having an axis that is offset from a corresponding point on Ferguson's axis of handle rotation in only a horizontal, and not in a vertical, sense. The result is significant: the Ferguson tool requires a rotation of the gripper arm through a very large angle—on the order of 45 degrees—before the gripper engages the post to be removed. In contrast, the differing offset geometry of the claimed stake removal tool allows such contact to be made after a much smaller rotation, on the order of five or ten degrees.

The ramifications of this large difference in required rotation angle are also significant. The small rotation angle of the claimed stake removal tool allows an operator of the tool to efficiently address and grip a stake, and to remove it not only with an economy of motion but also from a position of strength generated by a comfortable and natural arm and body position. The small rotation angle also allows the tool to be used on stakes that are in tight places or are close to the ground. The large rotation angle of the Ferguson tool allows none of these advantages. This is consistent with the stated goal of Ferguson: not to lift but instead to jack, or move by very small incremental movements, a post out of hardened concrete (see Ferguson, column 1, lines 1-9).

Based on the foregoing remarks, it is respectfully submitted that amended claim 1 is not made obvious by Ferguson. Aumiller does not even address the considerations raised in this section. Accordingly, Applicant respectfully requests that the 35 U.S.C. §103 rejection of amended claim 1 be withdrawn.

The Office Action cites, but does not rely upon, U.S. Patent No. 4,795,202 to Mader (hereinafter “Mader”). During a teleconference between the examiner and Applicant’s attorney it was pointed out that Mader may disclose an offset between handle and gripper axes similar to that described above and claimed in amended claim 1. However, whether or not it discloses such an offset geometry, Mader clearly does not disclose other limitations of amended claim 1, including at least the limitations directed to the ridge on the gripper. See, for example, FIGs. 4 and 5 of Mader, both of which depict a smooth roller. Also, see the text at column 3, line 47 to

column 4, line 2, which states that the lifting handles do not mar or damage the surface of the containers being lifted.

Furthermore, there exists no motivation to combine Mader with Ferguson because Mader explicitly teaches away from the ridged grippers taught by Ferguson. See, for example, column 2, line 65 to column 3, line 2, which refers to the requirement of the Occupational Safety and Health Administration (OSHA) that nothing should be used in handling pressurized gas containers that is likely to damage or weaken the container. In fact, at column 1, lines 27-36, Mader expressly criticizes a lifting band having sharp projections for digging into the sides of wooden barrels as being unsuited for use with pressurized gas containers because of the damage the sharp projections would inflict upon the containers. For the foregoing reasons, it is respectfully submitted that Mader and Ferguson cannot properly be combined, and that any rejection of amended claim 1 based on a combination of Ferguson and Mader would therefore be improper.

B. Remarks Directed to Claims 2-5

Dependent claims must be construed to include all of the limitations of the claims from which they depend, as required by 37 C.F.R. §1.75(c) and M.P.E.P. §608.01(n). Therefore, claims 2-6, which depend from amended claim 1, are also not made obvious by Ferguson, Aumiller, or their combination for at least the same reasons as listed earlier for amended claim 1. Accordingly, Applicant respectfully requests that the rejections of claims 2-6 be withdrawn.

C. Remarks Directed to Claims 7 and 10

At page 10, lines 1-11, the pending patent application, referring to FIG. 3, discusses a “touch point angle,” as follows:

The eccentricity also creates an angle between: (1) a line extending between point 311 and a point 371 representing the “touch point” where gripper 130 touches stake 290; and (2) a line 372 that passes through points 311 and 321. This angle, referred to herein as the touch point angle, is an important part of the geometry of stake removal tool 100, and serves to transform and amplify the vertical force applied to handles 110 and 120 into compressive force exerted on the sides of stake 290 by grippers 130 and 140. In one embodiment, the touch point angle can be between approximately twenty-two and twenty-three degrees. A touch point angle in such a range allows an operator of stake removal tool 100 to grip stake 290 with sufficient force to remove stake 290 from the

ground without developing such excessive force that circumferential ridges 234 and 244 dig into stake 290 and are difficult to release.

A limitation embodying the foregoing concept has been added to claims 7 and 10. Neither Ferguson nor Aumiller teach or suggest this concept. Accordingly, Applicant respectfully requests that the 35 U.S.C. §103 rejection of amended claims 7 and 10 be withdrawn.

D. Remarks Directed to Claim 9

As stated above, dependent claims must be construed to include all of the limitations of the claims from which they depend, as required by 37 C.F.R. §1.75(c) and M.P.E.P. §608.01(n). Therefore, claim 9, which depends from amended claim 7, is also not made obvious by Ferguson, Aumiller, or their combination for at least the same reasons as listed earlier for amended claim 7. Accordingly, Applicant respectfully requests that the rejection of claims 2-6 be withdrawn.

III. Remarks Directed to the New Claims

New claims 11-17 have been added herein. Section I, above, sets forth the location within the pending patent application of support for the new claims, none of which represents or contains new matter. The new claims are added to further particularly point out and distinctly claim the subject matter which Applicant regards as his invention.

IV. Remarks Directed to the Supplemental Materials

Included with this Response are some supplementary drawings, photographs, and explanatory text. The examiner is requested to consider this supplemental material as an aid to understanding the invention, as discussed in a teleconference between the examiner and Applicant's attorney.

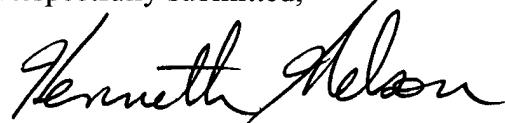
CONCLUSION

Applicants have made an earnest attempt to place this case in condition for allowance. In light of the amendments and remarks set forth above, Applicants respectfully request reconsideration and allowance of all of the pending claims.

No fees are believed to be due in connection with this Response to Office Action. However, the Commissioner for Patents is hereby authorized to charge any additional fees necessitated by this Response to Office Action, or credit any overpayment, to Account No. 02-4467.

If there are matters that can be discussed by telephone to further the prosecution of this application, Applicants ask Examiner Kramer to call the undersigned attorney at the Examiner's convenience, as discussed in an earlier telephone conference between the examiner and the attorney. The examiner is requested to make any such phone call prior to issuing any new office action, if an office action is found to be necessary.

Respectfully submitted,



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I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

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